

Application No.: 10/076003

Case No.: 57181US002

REMARKS

Claims 20 – 33, and 39 – 40 have been pending. Claim 27 is being canceled. Claims 1, 26, and 28 are being amended. Claim 41 is being added.

Claim 1 is hereby being amended to include the recitation of claim 27 that the patterned organic semiconductor layer is polycrystalline. New claim 41 is hereby being added. Basis for new claim 41 can be found, for example in original claims 1 and 27.

Rejections Under 35 U.S.C. § 103

Claims 20 – 22, 25 – 33, and 39 – 40 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Tang in view of Sturm. The rejection is traversed for the following reasons.

Amended claim 20 requires a polycrystalline organic semiconductor. The Examiner has asserted that Sturm teaches, “that the organic semiconductor is a polycrystalline organic semiconductor.” The Examiner references column 6, lines 50 – 68.

Sturm, however, teaches ink-jet printing polymeric semiconductors. Polycrystalline organic semiconductors such as, for example, polycrystalline pentacene, cannot be ink-jet printed. They must be vapor deposited. Sturm does not appear to teach or suggest vapor-depositing semiconductors. Sturm also does not appear to teach or suggest polycrystalline organic semiconductors. With respect to the text referenced by the Examiner, Sturm teaches that “a polymer semiconducting layer 122 of poly-thiophene, for example, is formed by ink-jet printing over insulator 120.”

Tang also does not appear to teach or suggest polycrystalline organic semiconductors. Amended claim 20 and its dependent claims are therefore unobvious and patentable over Tang in view of Sturm.

New claim 41 requires that the integrated circuit comprise one or more complimentary transistor circuit elements. The present invention includes integrated circuits which include one or more complimentary transistor circuit elements such as a complimentary metal oxide semiconductor (CMOS) element. The complimentary transistor circuit element may include a semiconductor layer comprising amorphous silicon. Organic, inorganic, or organic/inorganic

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hybrid semiconductor materials may also be used. For some circuits, both organic and inorganic semiconductors may be used.

The Examiner has asserted that Sturm teaches one or more complimentary transistor circuit elements (108, 110, 112) in Fig. 13C. Fig. 13C, however, is an OLED. The OLED, which contains organic "islands" of light emitting material, is described at column 6, lines 39 – 51. Neither Sturm nor Tang appears to teach or suggest complimentary transistor circuit elements. New claim 41 and its dependent claim are therefore unobvious and patentable over Tang in view of Sturm.

In view of the foregoing, Applicants respectfully request that the rejections under § 103(a) based on Tang and Sturm be withdrawn.

Claims 23 – 24 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Tang.

For at least the reasons discussed above, claims 23 and 24 are patentable over Tang, and Applicants respectfully request that the rejection under § 103(a) based on Tang be withdrawn.

Concluding Remarks

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration of the application is requested.

Respectfully submitted,

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Date

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